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INDIVIDUALIZED READING VERSUS A BASAL READER PROGRAM AT FIRST GRADE LEVEL, IN RURAL COMMUNITIES.

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THIS STUDY COMPARED THE EFFECTIVENESS OF A STANDARD BASAL READING PROGRAM WITH AN INDIVIDUALIZED READING PROGRAM WHICH INCORPORATED (1) A PROGRAM OF PHONETIC SKILLS, (2) WORD RECOGNITION, (3) COMPREHENSION SKILLS, AND (4) A PROGRAM OF STORY READING. TWELVE COMBINATION FIRST- AND SECOND-GRADE INDIVIDUALIZED READING CLASSES WERE PAIRED WITH 12 BASAL READING CLASSES IN RURAL AREAS AND PRE- AND POST-TESTED. THE FINAL TEST COMPARISONS WERE BASED ON (1) WORD RECOGNITION, (2) PHONETIC ABILITY, (3) COMPREHENSION RATE, AND (4) SPELLING. THE ANALYSIS OF VARIANCE FOR THE POST MEASURES SHOWED THE INDIVIDUALIZED METHOD SIGNIFICANTLY EXCEEDED THE BASAL METHOD ON ALL SUBTESTS EXCEPT RATE OF READING. THE FAVORABLE RESULTS INDICATED THE DESIRABILITY OF AN INDIVIDUALIZED READING PROGRAM AT THE FIRST-GRADE LEVEL. (PM)

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Individualized Reading Versus A Basal Reader Program At First Grade Level In Rural Communities

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TABLE OF CONTENTS

	Page
PROBLEM	1
SIGNIFICANCE OF THE STUDY	1
BASIC PHILOSOPHY	3
RELATED RESEARCH	4
OBJECTIVES	8
PROCEDURES	10
POPULATION AND SAMPLE	31
DESCRIPTION AND ANALYSIS OF DATA	35
CONCLUSIONS AND IMPLICATIONS	54
APPENDIX	

LIST OF TABLES

Table		
I.	Number of Letters Identified After Two Weeks Instruction.	16
II.	Comparison of Individualized and Basal Classes on January Tests.	17
III.	Distribution of Activities by Organization of Time-September and October.	23
IV.	Distribution of Activities by Organization of Time-January.	24
V.	Distribution of Activities by Organization of Time-May.	27
VI.	Distribution of Pintner-Cunningham Raw Scores.	35
VII.	Raw Score Means of Pre-Measures Compared for Individual and Basal Methods.	37
VIII.	Raw Score Means of Pre-Measure Variables Compared by Sex Across Treatments.	38

IX. Summary of the Analysis of Variance of 11 Pre-Measures for 3 Way Analysis: Sex, I.Q., and Treatment. 39

X. Comparison of Individual and Basal Treatments on 18 Post-Measures. 44

XI. Analysis of Post-Measures by High and Low Intelligence Levels and Treatments. 49

XII. Comparison of Achievement of Boys and Girls on the 18 Post-Measures by Treatment. 51

XIII. Comparison of Boys and Girls by Treatment on the 18 Post-Measures. 52

Individualized Reading Versus A Basal Reader Program At First Grade Level in Rural Communities

PROBLEM

This study designed, executed and evaluated a program in which instruction in first grade reading was conducted through an Individualized reading program, and the results were compared with a Basal reader program.

This Individualized reading method was based on a comprehensive program of phonetic skills, word recognition practice, comprehension skills and a program of story reading. The method differs from the popular concept of Individualized reading which is largely a program of story reading unsupported by a skills program.

The Basal reader program, probably the most widely used approach to reading instruction throughout the country at the present time, provides reading instruction through basal textbooks, teachers' guides and supplementary materials. The system is based on a controlled vocabulary and prescribed systematic skills program, and is usually conducted within the organizational pattern of the three-group ability plan.

Significance of the Study

- Reported research on the evaluation of the Individualized method of teaching reading has been concerned primarily with

descriptions of procedures and interest in the number of books read.

- A comprehensive skills program using library books as instructional materials has not been studied as a method of teaching first grade reading.

- Sufficient controlled research has not been conducted to evaluate the effectiveness of either the Individualized reading method or the Basal series program.

- Controlled research is not available which compares the effectiveness of the Individualized method with the Basal reader system.

- Current interest and controversy concerning the Individualized reading method is evidenced by the increased number of published reactions to the method, reports of action research and conference time devoted to the issue. Controlled research is needed to answer the questions concerning the effectiveness of the method.

- Available research reports deal almost exclusively with studies conducted above grade one level. However, the beginning reading period would seem the best time to determine and provide the most effective approach to reading instruction.

- Opportunities for reading in small rural communities are often limited to Basal materials. The experiences with library books for varied reading and enjoyment is often limited to the occasional visit of the State Book Wagon. This study might very well motivate classroom libraries in these areas.

- Growth in social and personal values through the wide variety of materials and opportunities for choice of reading content and

activities should be evaluated, as well as the reading achievement results of the program.

Basic Philosophy of the Individualized Reading Program

This study developed from the philosophy that individualization in reading instruction is essential to provide effective learning.

Several educators have described Individualized reading programs which generally present the method as a free-choice story-reading program without formal instruction. Individualized reading in this research differs from the widely popularized library reading program, by incorporating a systematic basic skills program as the basis for an independent story-reading program. Since success in reading is determined by independence in word recognition and comprehension of material read, it would seem necessary that any program of reading instruction should provide for the teaching of the essential reading skills - beginning with the pre-reading program.

Individualized reading cannot be effectively administered within the framework of the three-level ability grouping plan. A flexible organization incorporating a variety of grouping patterns from individuals working alone to a whole-class teacher-directed group would provide for effective individualization.

Independent story reading and sharing of stories are essential and enjoyable as well as effective for silent and oral reading practice. However, the child must master word and comprehension skills for independence in reading.

Related Research:

Current interest in the individualized method is a renewed emphasis on instructional plans which were popular in the early 1920s. The Winnetka and Dalton plans were probably the most widely used of several organizational plans designed to provide learning situations. Several concepts common to the Winnetka and Dalton plans are also present in our current individualized method.

- Encouraging progress at the learner's own rate and level of learning
- Permitting individual progress
- Eliminating pupil failure
- Providing for group and creative activities

However, the present philosophy of individualized instruction is basically concerned with reading achievement and beyond to include interests, attitudes, and other personal values. An important influence on the recent trends in the individualized reading method has been the studies of Dr. Willard C. Olson.[1]

The need for controlled research which compares the relative effectiveness of the individualized and widely used group Basal reading methods is indicated by the interest expressed in the individualized method and the lack of definite data from which to draw generalizations.

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1. Willard C. Olson, "Seeking, Self-Selection and Pacing in the Use of Books by Children," The Packet, Boston, D.C. Heath, Spring, 1952, pp 3-10.

Barbe,[1] in his discussion of Personalized Reading states, "There has been little research, other than 'action research'.....As more people become aware of what such a program actually is, more research will be forth coming."

Veatch[2] has collected reports of eighteen action research studies, as described by teachers, principals and supervisors. Each has reported favorable results from various approaches to the Individualized reading method. However, the amount of objective data available from the results of those studies is inadequate and inconclusive, due to the lack of controls.

Smith[3] also points out the need for controlled research as she summarizes,

> "Individualized instruction is probably the most discussed plan currently offered as a procedure for teaching reading more effectively. This plan, as it is usually carried out combines and applies much of our modern information concerning child psychology: it is self-propelled, the child seeks that which satisfies him, and he works at his own pace...
>
> Very little valid research has been conducted in regard to the effectiveness of individualized instruction. The studies that have been made are contradictory in their results, some indicate superior results in reading achievement, others show no superiority over other methods. Many of them report an increase in pupil interest and teacher enthusiasm. Much more careful evaluation of this plan is needed."

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1. Walter B. Barbe, Educator's Guide to Personalized Reading Instruction, New Jersey, Prentice-Hall, 1961, p. 59.
2. Jeannette Veatch, Individualizing Your Reading Program, New York, G.P. Putnam's Sons, 1959, pp. 61-242.
3. Nila Banton Smith, International Reading Conference Proceedings, 1960, p. 26.

Other writers have joined in the controversy. Sperry[1] reported in 1961 that there is an increased number of basic research studies dealing with Individualized reading. She states that around the country there are many experiments dealing with the organized plans for teaching reading, with most of the studies within the framework of the basal text structure. Specifically she concludes, "The current experimentation within the framework of the basal text would seem to be indicative of unrest or dissatisfaction with the existence of group-type directed reading activity."

Witty[2] in an analytical evaluation of the research reported on Individualized reading states:

> "It may be readily concluded that available experimental data do not justify the recommendation of sole dependence on individualized reading. The experiments appear generally to be inconclusive and to lack sufficient provision for variable factors which may influence results. Most teachers, however, who write on this topic are enthusiastic in their indorsements and many children seem to find satisfactions previously not experienced in reading.

Also McCullough[3] points to the research in Individualized reading as inconclusive. Some studies have had no controlled groups to match the experimental groups. Success of the method has been measured in times of reported enjoyment of the procedures, number of books read and scores on survey tests.

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1. Florence Sperry, 'What Research Says About Individualized Reading,' Claremont Reading Conference, 1961, p. 74.
2. Paul Witty, 'Individualized Reading - A Summary and Evaluation,' Elementary English, October, 1959, p. 408.
3. Constance M. McCullough, 'What Does Research Reveal About Practices in Teaching Reading,' English Journal, Vol. 45, pp. 475-490.

Smith[1] reports on two unpublished studies which favored the Individualized plan.

> Philip Acinapura, 'A Comparative Study of the Results of Two Instructional Reading Programs,' Unpublished doctoral dissertation (New York: Teachers College, Columbia University, 1959). - Fourth, fifth and sixth graders, matched in reading ability, I.Q. and socio-economic status, were divided. The experimental group was taught by the individualized method and the control group by the three-ability grouping plan. Results of tests showed the groups to be equal in vocabulary but the individualized group was significantly superior in silent reading comprehension and total silent and oral achievement.
>
> Antoinette McCristy, 'A Comparative Study to Determine Whether Self-Selection Can Be Successfully Used at Second Grade Level.' Unpublished Master's Dissertation (Los Angeles: University of Southern California, 1957). Eight second grade classes were matched in year's attendance, age, mental status, socio-economic class, reading grade, and teacher background, experience and competence. The experimental group, taught by the individualized method, averaged.27 years above the control group in total reading gains; .87 years superior in vocabulary growth. In comprehension, two years or more gain was made by fifty-nine percent of the experimental group, but only twenty-four percent of the control group scored this well.

Most studies of Individualized reading have been concerned with intermediate and upper grades; after children have acquired the elementary basic reading skills. Only a few have attempted to determine the effectiveness of Individualized reading at the primary level, specifically grade one, and these studies report lack of controlled research.

This summary indicates the type and extent of research concerned with the individualized method of teaching reading. There is virtually no controlled research which compares the Basal series group method with the Individualized plan. Furthermore, experiments with

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1. Nila Banton Smith, ibid. pp. 155-156.

Individualized reading at the beginning stage of first grade reading have not been reported in the available research. This would indicate a need for carefully designed and controlled studies at the first grade level.

OBJECTIVES

This study was designed to gain knowledge for better instruction in reading at first grade level. Also, it proposed to test the claims of advocates and critics of the Individualized and Basal series methods of teaching reading.

To compare the relative effectiveness of these two methods, this study proposed to answer the following questions.

a. Does a program of Individualized reading instruction at first grade level result in higher achievement than a Basal series program?
   - In what areas of reading are the major differences in achievement?
   - Does one method serve the high ability pupils or low ability pupils better than the other?
   - Is there a difference in the achievement of the two groups at the middle of the school year?
   - Does either method favor one sex more than the other?

b. Do pupils in the Individualized program receive adequate time in their reading schedule?
   - Do pupils spend as much time on reading activities?

- Do pupils receive adequate teacher-directed skills practice?
- Do pupils engage in as many and varied group participation activities?

c. Does the Individualized reading program provide as adequate organization and time allotment for efficient teaching, as the Basal series program?

- Does a varied flexible system of grouping for instruction produce as effective learning as the three-group ability organization?
- Are the pupil-team practice groups as effective as the individual working alone in practice exercises?
- Can the individual conferences be scheduled often enough to meet the individual child's instructional needs?
- Does the frequent exchange of team partners to fit the learning activity equal ability to unequal ability produce as efficient learning as constant larger ability groups?
- Can the variety of learning experiences be incorporated into a smooth-running program with pupils working to capacity and no time spent in idle

waiting or confusion?

- Does the teacher have time to read all the materials which the pupils are reading?
- Is there time for the teacher to keep a continuous record of each pupil's progress and needs?

d. Do pupils in the Individualized program read more books than the Basal reader pupils?

e. What is the reaction of teachers to the Individualized method?

- Do teachers plan to continue teaching by the Individualized method?
- Do teachers prefer to return to the Basal program?
- Do teachers prefer to teach by a combination of the two methods?

PROCEDURES

General Plan of the Study:

The purpose of this research was to design and conduct a program of Individualized reading at first grade level. The results of achievement in vocabulary, comprehension and oral reading would be compared with the progress made by first grade classes taught by the ability group techniques and the materials prescribed in the Scott Foresman Basal Reader program.

Description of Methods and Materials

Individualized Reading Program

The basis of the method were programs of intensive

and systematic phonics and sight vocabulary practice as well as an individualized library reading program.

Individualized Phonetic Program

The teaching of letter names and the indentification of phonemes in spoken words and matching them to forms in print using a variety of efficient techniques constituted the major portion of the reading readiness program. The multiple-response technique[1] was effectively used to individualize teacher-directed activities.

Examples: Teacher asks pupils to listen for sound. Each has pupil response cards and displays the appropriate letter card and gives the letter sound or name to answer the teacher's question.

1. 'Hold up the card that tells the beginning letter of - beaver, people, team - These intitial consonants are easily distinguished since the e which follows makes it necessary to say letter name b when beaver is pronounced.'
2. 'Hold up the letter that comes at the beginning of this picture's name.' Picture of a house. 'Yes, h is the first letter in house.'
3. Teacher holds up a card with three pictures. 'Look at all the pictures. Which one is a toy?'

1. Donald D. Durrell, Improving Reading Instruction, World Book Co., New York, 1956, p. 83.

Hold up the letter card that begins its name.

'Yes, b is the first letter in ball.'

Pupil-teams of pairs working together orally and writing the responses provided the practice activities for mastery of the letter names and sounds in words. Before pupils were able to write answers, they responded on overlays of old x-ray sheets, so that worksheets were reused by other teams.

Pupils worked together to determine correct answers and took turns marking the x-ray sheet or each wrote the answer on separate papers. When the exercise was completed they checked their answers with the key on the reverse side of the job sheet.

Pupil-team activities

1. Two pupils have a practice sheet of numbered pictures with three or four letters under each picture. Each pupil numbers his paper and they work to decide the correct initial letter for each picture and write the letter on their papers.
2. Pupils work together to find words in the picture dictionary which begin with certain letters and copy the words.
3. Practice sheet has pictures in a column. Pupils are instructed to find words which begin with the same sound. 'Look at the first picture on your paper. Write its first letter. Now find in your dictionary an animal

that begins with h like house. Pupils work independently to find animals beginning with letters like a picture.

4. Pupils select words by meaning when initial letter substitution is the task.

   Example: A fat rat

   Sat in a _____. cat hat bat

5. Workbook and other published materials were used whenever pages were appropriate for specific teams. These materials were taken from the books, mounted on tagboard and filed by skills and levels.

The value of this program of early intensive phonetic background has already been established and reported by Durrell[1] from his extensive research in the "First Grade Reading Success Study.

After a child had learned 15 or more letters he was considered ready for the basic word-skills program. A comprehensive phonetic program was necessary since individual progress in first grade reading rests upon a solid basis of thoroughly learned phonics. These skills were more essential in the independent reading program since the pupils were reading different books and the teacher could not be free to present all the new vocabulary needed by each child.

The new Durrell-Murphy[2] Speech-To-Print-Phonics; a comprehensive

1. Donald D. Durrell, "Success in First Grade Reading, A Summary," Journal of Education, Vol. 140, February, 1958.
2. Donald D. Durrell, Helen A. Murphy, Speech-To-Print-Phonics, Harcourt Brace & World, Inc., N.Y., 1965.

phonics program designed to teach initial consonants and blends, final consonants and blends, phonograms, vowels and homophones was selected. This word analysis program is based on words within the child's listening vocabulary which he learns to identify by applying the learned word element in a meaningful situation. The multiple-response procedure serves to create and sustain interest as well as inform the teacher of each pupil's needs.

Example:[1] Summary of Lesson 11 - Speech-To-Print-Phonics

Teaching D as a beginning sound

Procedure: Words are printed on the board

dance dive dig dust decorate

Teacher states that here are words that tell things they might do. She reads each word and points out the initial d and its sound. Other groups of words, some beginning with d are read and children hold up the d card when they hear a word beginning with the d sound.

Animals with four legs, things that children like, children's names are the categories.

Cards with words are displayed by the teacher.

Card A.	day	hay	pay
	1	2	3

The teacher explains that all the words end with the sound of ay.

Each child has number cards 1, 2, 3. He holds up the right card to answer questions asked by the teacher. (9 questions)

1. Donald D. Durrell, Helen A. Murphy, Speech-To-Print-Phonics, Harcourt, Brace & World, Inc., N.Y., 1965, Lesson 11.

1. Which of these is food for horses? (2)

2. Which comes after night? (1)

3. Which do you need money for? (3)

While mastery of the words as sight words was not emphasized, most of the words were retained by all but the slowest learners. Although no study was specifically done, the teachers reported that the slow learners generally mastered more sight vocabulary through the Speech-To-Print-Phonics program than other techniques which were used.

The Speech-To-Print program was taught to pupils in various size groups from whole-class to individuals, depending on the pupil's needs and readiness. Some follow-up activities which were worked in teams of two or three were provided by Dr. Durrell but the teachers developed most of their practice exercises by exchanging ideas.

The program adapted readily to this individualized method since the pupils could progress as rapidly as each was able, to independance in word attack.

Evidence of the effectiveness of this intensive phonetic program was revealed as early as the end of September. After two weeks of intensive teaching of letter names the Individualized reading classes already showed superior achievement to the basal system as may be observed from Table I.

TABLE I

Mean Number of Letters Identified After

Two Weeks of Instruction - September 30, 1965

	Individualized	Basal	Diff. in Means	C.L. level
Capital Letters	23.7	16.6	7.1	.01
Lower Case Letters	19.6	16.1	3.5	.01
Upper Case Phonemes	14.8	8.6	6.2	.01
Lower Case Phonemes	16.0	8.7	7.3	.01

Table I shows that the Individualized reading group mean of capital letters known after 10 days of instruction was 23.7. The mean for the Basal group was 16.6.

The average number of lower case letters identified by the Individualized groupwas 19.6. While the mean for the Basal reader group was 16.1.

The average number of upper case phonemes known by the Individualized group was 14.8 and the average for the Basal group was 8.6.

The Individualized classes averaged 16.0 on the test of lower case phonemes and the average for the basal classes was 7.3.

These differences between the Individualized and Basal groups in letters and phonemes known after 10 days of instruction were significant at the .01 level, favoring the Individualized reading method.

These differences between the two methods shown so early in the program would indicate that the intensive letter-knowledge instruction produced effective learning earlier than the more informal reading readiness program of the basal reader program.

A second measure of the effectiveness of the intensive phonetic

program of the Individualized method was conducted during the first week of January. The Durrell-Murphy Phonics Test and Detroit Word Recognition were administered to both treatments with the results as shown in Table II.

TABLE II

Comparison of the Individualized Reading and Basal Reading Classes on on Durrell-Murphy Phonics Test and Detroit Word Recognition Test on January 30, 1965

Tests	Mean Score Ind. R.	Mean Score Basal R.	Diff. Mean	F Ratios
Durrell-Murphy CSPS	22.59	18.17	4.42	49.35
Durrell-Murphy L. Case	18.77	13.50	4.27	71.47
Durrell-Murphy Init. Sounds	35.73	25.42	10.31	132.57
Durrell-Murphy Init. Sounds	34.99	23.35	11.64	150.46
Durrell-Murphy Final Sounds	11.78	7.39	4.39	114.06
Durrell-Murphy Phonograms	42.77	26.69	16.08	120.49
Detroit Word Recognition	18.22	11.94	6.28	41.02

Table II shows that the Individualized reading classes achieved significantly higher than the basal reading classes on all six of the sub-tests in the Durrell-Murphy Phonics Test and the Detroit Word Recognition Test. These differences above the .01 level of significance are shown after the means of the groups had been statistically adjusted through an analysis of covariance treatment. The F ratio for the sub-tests show wide differences between the groups, favoring the Individualized treatment. Greater differences on the letter tests and the Detroit Word Recognition Test might have occurred if the ceiling for these tests had been higher. Many more of the Individualized pupils achieved perfect scores than among the basal pupils.

The wide differences in achievement on these tests at the mid-point in the year is evidence of the superior effectiveness of the word skills program in this Individualized reading program over the basal reader system of vocabulary building skills.

Sight Vocabulary

Sight words were taught through individual and small group activities: phonic transfer practice, experience stories, picture dictionaries, teacher conferences, taped story lessons, pupil word books, work book sheets, teacher-prepared work sheets, and pupil-team work were among the activities used for building the necessary sight vocabulary for independent story reading.

Vocabulary words for teacher-made work sheets were the most frequently used first grade words selected from standard reading vocabulary lists:

Durrell-Graded List of Words

Gates-Primary Reading List

Dolch-100 Most Common Sight Words

Some types of vocabulary exercises:

1. For phonetic transfer practice, a phonogram dictionary was compiled with pictures to illustrate the key words. (Sample is included in the appendix of this report.) This was to give the pupil independence with phonetic words.

   Example: 1. Pupils worked in teams to classify the words in the correct categories and write them.

car	cat
sack	pan
rat	camp
hare	peach
Can run	Can not run

2. Pupils read the sentences and chose the correct word. They wrote the sentences. (The number was to help in locating the key to the phonograms in the dictionary

   Man can fan the ___5___

   ran man tan

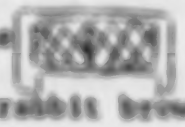
   Can you ___9___ the ball!

   catch hatch

3. Experience stories were made by individual pupils and small groups under the direction of the teacher. Words of high first grade reading frequency were emphasized and copied into the child's word book to be mastered. These stories were read and reread by pupils in teams and some comprehension activities or vocabulary practices later followed up many of the stories.

4. Early exercises incorporated the rebus technique to aid vocabulary recognition.

   a. Make a rabbit.

      Make a cage  for the rabbit.

      Color the rabbit brown

      Make the cage red.

5. Picture dictionaries were available to all children and were used constantly in vocabulary activities.

   Example: Write the names of 4 things that can fly.

   Find 6 things that you can do.

   Write a sentence about what a boy can do.

   Key direction words were taught by the teacher.

6. Stories were taped and vocabulary learned by an individual or team listening several times and finally being able to recognize the words independently. The pupils enjoyed this activity. It seemed particularly effective for the slow learners who needed much practice.

The taped reading technique is being studied under research controls by Dr. Donald Durrell at Boston University.

Oral and silent reading skills were taught and practiced through individual teacher-pupil conferences, pupil teams and various types of groups instructed by the teacher, as determined by individual needs.

Skills practice-materials were selected from all possible sources or constructed by the teacher and filed by code, according to skills and levels. Most exercises were worked independently by the pupils as they followed directions for the selection of the job sheet from the file, worked with a partner or alone and corrected their own responses immediately.

The pupil-team technique was essential to free the teacher to work with individuals. These activities became so popular and effective that teachers were concerned at the large amount of learning which was taking

place without their drill lessons. The independence in self-directed learning and concern for helping each other which grew from the team activities provided help when needed and allowed individual progress without waiting for the teacher.

The reading materials for the program were library books from all available sources and available basal readers. Each classroom was provided with at least $300.00 for library books. The remainder of the books were acquired from public libraries and children's collections.

The major problem for the project was the lack of a sufficient number and variety of books available to the Individualized classes.

The teachers read all books included in the instructional program. They provided a list of phrases containing the difficult words for each book which were read by the child before he attempted the new book independently. This technique helped to assure the pupil and the teacher that the book was not too difficult. The teachers also made a comprehension check for each book to be answered by the child at the completion of the book, usually in writing. All books read by each child were checked by the teacher in conference. Near the end of the year some children became checkers to prevent pupils waiting for teacher-conferences. Then the teacher could check out at one conference two or three children who had read the book. This technique provided an excellent opportunity for developing creative thinking.

Organization of the daily reading schedule varied among teachers and from day-to-day in a given classroom. Four or five activities were listed on the chalkboard and the sequence discussed before the

work of the day began. The teacher was then freed for individual conferences and the pupils could work as rapidly as they were able.

The Scott Foresman Basal Program:

Classes using the basal reader approach were taught by the techniques presented in the teacher's manual beginning with the basic readiness program.

The materials which the teachers used were those prescribed by the publisher; readiness workbook, readers with accompanying work-books and recommended supplementary materials, as directed by the teacher's manual.

Pupils were instructed in ability groups and teachers were encouraged to use pupil-team activities.

Techniques included in the teacher's manual and supplementary tests provided with the basal materials were used to aid the teacher's evaluation of progress.

Time Schedule and Organization:

All classes of both the Individualized and Basal reader programs spent the regularly scheduled amount of time on reading activities. It was not possible to define the limits of formal reading instruction in the Individualized method since the whole language arts program was involved. However, the classes of both methods spent a comparable amount of time daily on reading and related activities.

The instructional program began during the week of September 15 following the initial testing program and continued for 140 days.

Individualized Reading:

During September and October more time was necessary for teacher-directed activities for all levels of pupils, since only 10 of the 250 pupils who started the program could read when they entered school.

The following table shows the approximate distribution of time for the Individualized reading and related activities during the first six weeks of the school year.

TABLE III

Distribution of Activities by Organization of Time - September and October

Organizational	Distribution of Time by percentage of 3 hours		
Activities	Top Half	Third Quarter	Low Quarter
Individual	20	10	5
Pupil-teams	40	40	30
Teacher-directed	40	50	65

Table III shows the approximate proportions of time devoted to individualized, pupil-team and teacher lead activities. During the first six or eight weeks most of the pupils needed direct teacher instruction for half the time.

The Speech-To-Print-Phonics program was presented to the whole class by the teacher using multiple-response techniques for individual responding. The slow pupils were then given individual and small group teacher-led practice. The slow pupils were also given more help by the teacher for vocabulary mastery and learning to write.

From the beginning of the program all pupils were able to work

in teams about 40 percent of the time on phonetic practice sheets and vocabulary exercises. Seventy-five percent of the pupils could help each other in pairs with reading of books when the teacher was free to circulate to give vocabulary assistance.

Teacher-led small groups varied in size and pupils. There was no group of pupils who remained as a group for teacher-instruction more than a few days. During the pupil-team activities pupils worked with different partners about every day. Sometimes the partners were of equal ability and often a slower pupil received help from a partner with more reading ability.

At the beginning of the program the slow pupils worked independently on work sheets but were unable to progress in story books without help. However, the faster pupils used various devices to add sight vocabulary quickly: teacher-prompting, experience charts, picture dictionaries and parent help at home. Pupils were encouraged to take home the stories he was reading. Parents and older children contributed much help as word prompters, listeners and questioners for checking comprehension.

By the end of January the time allotment had greatly changed. Table IV shows the change in organization of time.

TABLE IV

Distribution of Activities by Time at the End of January

Organizational Activities	Distribution of Time by Percentage of 3 Hours		
	Top Half	Third Quarter	Fourth Quarter
Individual	40	30	20
Pupil-Team	50	50	50
Teacher-Directed	10	20	30

Table IV shows the change of emphasis from dependence on teacher-led instruction to pupil-team learning and individual independence. During the pupil-team and individual activities the teacher directed her time to individual conferences and assisted small groups of pupils with special needs. The phonics program was still the major teacher-led activity for the upper three quarters of the class. Also, new skills were teacher presented to small groups and occasionally to the whole class, depending on the needs.

Pupils at all levels were able to read independently in story books. Pupil-teams developed almost complete independence except when new types of activities were initiated the pupil-teams became more effective learning units. Equal ability teams practiced the various word and comprehension skills and shared stories. Teams of unequal ability shared stories and received skills help by the better reader. For play reading, writing activities and story reading the pupils often selected team-mates. This was successful as evidenced by the pupil activities during free-time; early arrivals to school, noon hour, and after school activities. Pupils were able to find story and play parts for their less able friends and were often seen to coach someone to read his part well.

Children were reading many books independently at home and at school. Parents expressed much interest in the program. They commented on how well and independently their child read and enjoyed reading. It pleased parents that the children wanted to share books with them.

Independence in writing grew rapidly during this period. Individual story and play writing to be shared in teams was popular among pupils of the top half of the classes.

Spelling ability developed rapidly in response to the need to write. The more able pupils often helped the less able so that the teacher's time was seldom used for spelling instruction. Pupils learned to help themselves by finding words in story books, on charts, in dictionaries and in their personal word-books.

The period - November, December and January seemed to be the period of most rapid growth in individual reading independence. Pupils were able to apply with ease the early phonetic skills and all but the lowest 25 percent could read with almost complete independence. They developed the ability to select books which they could read and enjoy. Also, they were able to follow the daily schedule of activities - completing a pupil-team or individual task and moving on to the next without direction from the teacher. Pupil helpers were consulted if problems arose, so that it was not necessary to interrupt a teacher-conference or wait for help.

By the end of the school year the following time distribution was common in the individualized classes.

TABLE V

Distribution of Activities by Time in May

Organizational Activities	Distribution of Time by Percentage of 3 Hours		
	Top Half	Third Quarter	Fourth Quarter
Individual	75	55	45
Pupil-Teams	23	35	35
Teacher-Directed	2 - 3	10	20

By the end of the school year the top half of the class were working independently in pupil teams or individually about 97 percent of the time each day. The lower pupils needed teacher conferences more often and teacher help with the transfer skills and comprehension. By the end of the year this group was still receiving teacher instruction in the Speech-To-Print phonics. They also needed help with writing skills.

Less teacher time was needed by pupils as the program progressed. However, all pupils needed some of the teacher's time each day to evaluate progress and needs as well as provide instruction in new skills. At all times during the year and for all pupils the teacher was vital in providing motivation and security in learning.

Daily Schedule of Activities:

The daily program varied between classes and from week-to-week within each class. The schedule was written on the board or a chart each morning and afternoon before work began. A typical daily program of reading and related activities follows.

1. Do your phonics work sheet with a partner.

2. Read to yourself.

3. Do the comprehension check by yourself.

4. Read with a partner.

5. Find your skills sheet in the files. Work with your partner.

6. Write a funny story.

7. Read your story phrases to a partner.

8. Read your list of hard words to a partner.

9. You are ready for a conference. Put your name on the board.

In April and May pupils who had read certain books and had been checked in a teacher conference became checkers for these books. Then pupils could read a new book and the teacher could check two or three pupils in the same book. This procedure prevented pupils waiting for the teacher-conference and made it possible for more books to be read. All pupils were checked by the teacher on each book read.

Supervisory and Teacher Education Activities:

Teachers of the Individualized reading program enrolled in a three-week workshop at Johnson State College for planning instructional techniques and constructing practice materials. One week at the end of June was spent in the workshop. The teachers then worked on the preparation of materials during the summer. Late in August the workshop was resumed and preparations for the project were completed.

Teachers lived on campus during the workshop which provided uninterrupted time for working and opportunities for sharing ideas and solving problems. The reaction of teachers to the team technique was very favorable. They felt that they became more secure with the new method

and learned much from each other.

Workshop Activities

The workshop began at 9:00 a.m. each day and continued to 9:00 p.m.

The time from 9:00 a.m.-12:00 noon was spent on lectures and demonstrations of philosophy techniques and materials.

Demonstrations were conducted by the project directors illustrating teaching procedures.

1:00-4:00 p.m. Small group and individual work on projects.

7:00-9:00 p.m. Evaluation and conferences as well as individual work on materials.

First Week:

It was necessary to work out the details of a basic philosophy since the approach was new to everyone.

There wasn't a library in any of the schools participating. The average number of library books in a classroom was 13 and the most in any classroom was 45. The first tasks were to look and select books and order $300.00 worth for each class. Whenever possible paperbacks were ordered to provide more books with the limited funds. Book orders were compiled.

Teachers needed instructional and practice materials for the program. It was necessary to compile and construct all materials since only one Basal reader series was available. Teachers ordered single copies of as wide a variety of practice materials as possible, at levels pre-primer to grade three.

Varied vocabulary practice-sheets were constructed from standard

word-lists of the words most frequently found in first grade reading.

A skills program was developed and a system of evaluating and record keeping determined.

Second and Third Weeks:

During the last two weeks of August the teachers returned to Johnson with their library books and materials for building exercises. Book checks were completed and many work sheets developed and shared. It was difficult to believe that so much teaching material could be compiled in one summer. Teachers shared their ideas and materials so that each one had 5 to 10 times as much material as though she had worked alone. Teachers estimated that their files contained more than 1500 different exercises for practicing the various skills at levels from readiness through grade three. The exercises were organized by keys for levels and skills. Most exercises were mounted on tag board with the answer key attached. During the year more exercises were developed by teachers and directors. Samples were mailed to other participating teachers.

Bookkeeping ledgers were converted into record books and progress in each skill was recorded monthly. Daily records for teacher-pupil contacts were outlined.

The function of the teacher in the program was determined and guidelines for the teacher-pupil conference set up.

Special attention was focused on the classroom organization and timing of activities.

Various types of pupil-teams were demonstrated with a variety of appropriate materials.

The new Speech-To-Print Phonics, the phonetic program on which this Individualized method was to be based was studied and demonstrated.

The workshop was continued during the year in the form of 3 all-day evaluation sessions with the teachers and their supervisors and administrators.

The Basal Reader teachers met with supervisors and project directors to become familiar with the project and discuss procedures and materials to supplement the basal-system. Two one-day planning and evaluation workshops were conducted during the year. All superintendents and supervisors were included in these all-day sessions.

Ten senior students were trained to assist with the administration and scoring of the initial and final tests.

The Individualized Reading classes were visited by the director, research associate and local supervisors nearly every week to assist with materials and procedures since the method was new to these teachers.

Basal reader teachers were also visited but less often because they had materials and were experienced with the method.

Population and Sample:

Teacher Selection

In April superintendents were informed of the research study and invited to participate in the project. Several more than the number of classrooms needed for the study were offered but the requirement of $300.00 per Individualized class for library books to be used as instructional materials ruled out many towns. There was no money available for classroom libraries in these rural areas.

However, eleven towns agreed to provide the necessary books and twelve classes were available for the study.

Superintendents were requested to invite their best teachers to volunteer for the project. Teachers were selected who were rated above average by their superintendents or supervisors. The raters were encouraged to consider the teacher's ability to provide for pupil differences and the past achievement of her classes, among the criteria when selecting the teachers for participation in the study. All had taught in their present first grade positions for at least one years, by the basal reader program. Teachers who were interested in attempt the individualized method were selected for that program and paired with ten volunteers of equal rating in instruction by the Doris Freeman Basal Reader system. No teacher had taught previously by the individualized method. In fact, an individualized reading program had been initiated in Tennessee schools previous to this study.

Five of the twelve individualized teachers were paired with a basal teacher in the same building. Schools were scattered about the state as far as 130 miles from Johnson. However, teachers were paired in the same school district in an effort to pair classes with comparable social and economic backgrounds.

Pupil Selection and Class Assignments:

All pupils in eighteen first grade and four first-second grade combination classrooms participated in the experiment. Twelve were individualized classes and ten followed the Basal reader program. In

five schools there were pairs of Individualized and Basal first grades. Other classes were paired in different buildings in town or in different towns but under the same superintendent.

Children were assigned to classes by an alternate alphabetical procedure or other chance placement techniques to provide random placement.

First grades varied in size from 6 to 40 pupils with an average enrollment of 25 pupils in the Individualized classes and 17 pupils in the Basal reader classes.

Equating the Groups:

The following pre-instruction tests were administered to the twenty-two classes September 8 - September 16, 1964.

Murphy-Durrell Diagnostic Reading Readiness

Metropolitan Reading Readiness

Pintner-Cunningham Primary Intelligence Test

Thurston Identical Forms

Thurston Pattern Copying

After 10 days of instruction all classes in both treatments were administered the Durrell-Murphy Letter Names Test - lower and upper case letters.

At the mid-point in the instructional program, January 26-29, 1965, all classes were administered the

Durrell-Murphy Phonics Test (Harcourt, Brace & World)

Letter Names, upper and lower case

Phonemes, sounds in isolation and sounds in words

Phonograms, in isolation

Detroit Word Recognition Test

After 140 days of instruction, May 5-12, 1965, the following post-instruction tests were administered.

Group Tests - all pupils

Stanford Achievement Test, Primary I battery, Form X

all sub-tests

Gates-Primary Reading, Vocabulary Test

Individual Tests - all pupils

Gilmore Oral Reading Tests

Accuracy, Comprehension, Rate

Gates Word Pronunciation Test (Form 1, 50 words)

This is a test of phonetically irregular and phonetically regular words.

The following individual tests were administered May 5-12, 1965 to a random sample of the population of both treatments. Every fifth pupil, alphabetical order, was selected from each classroom.

Harlan-Phonemic Word List

Harlan-Pre-Phonetic Word Test

These are tests of phonetically regular words.

Reading-Writing Samples

All tests were administered and scored by the director, research associate and a team of trained students.

Results of the study were analyzed by a multivariate analysis of variance program at the University of Minnesota Research Center.

DESCRIPTION AND ANALYSIS OF DATA

The results of the tests were analysed to answer the questions set up in the objectives of this study, on page 8 of this report.

The data were cleared of all individuals for whom any test results were missing. No results are reported for analysis of partial data.

The data were cleared for 29 variables: 11 pre-measures and 18 post-measures. After the clearing of the data 347 individuals remained in the study: 200 in the Individualized treatment and 147 in the Basal Reader treatment. The loss of pupils by data purification amounted to: 39 in the Individualized method and 33 in the Basal Reader method.

The Pintner Cunningham Intelligence test results were blocked into four intelligence quotient levels, attempting to hold the number of individuals in any level - approximately constant. This procedure seemed advisable since the Pintner raw score conversion to I.Q. may lack dependability, due to norming procedures.

The following table classifies the population by ability levels, sex and treatment.

TABLE VI

Distribution of Pintner Cunningham Raw Scores in Four I.Q. blocks for Treatments, 1 and 2, Sex and Totals.

Pintner Cunningham Test			Individualized			Basal			Grand Total
Level	Raw score	I.Q.	Boys	Girls	Total	Boys	Girls	Total	
H	> 42	106+	15	29	34	19	18	37	91
H M	37-42	95-105	24	30	34	11	12	28	82
L M	30-36	84-94	18	21	39	18	27	45	84
L	< 29	83 or less	20	23	53	20	17	37	90
Totals			83	113	200	73	74	147	347

Table VI summary of data blocking, assumes a mean chronological age of 74 months and the Pintner Cunningham conversion tables are assumed to be accurate. The data were analyzed on the basis of these four ability blocks, designated H-High, (I.Q.-104 and above); H.M.-High Middle (I.Q.-95-103); L.M.-Low Middle (I.Q.-86-94) and L-Low (I.Q. 85 or less).

The distribution of population by sex shows rather comparable groups of 189 girls and 158 boys.

After blocking, a 3-way analysis of variance was established for I.Q., sex and treatment.

Analysis of Pre-Measures

Eleven pre-instruction tests were analyzed by the 3-way analysis of variance technique to determine differences between the two treatments. The variables selected were:

Durrell-Murphy Reading Readiness Test

- Phonemes
- Upper Case Letters
- Lower Case Letters
- Total Score
- Learning Rate

Thurstone Pattern Copying and Identical Forms

Metropolitan Reading Readiness Test

- Word Meaning
- Listening
- Matching
- Alphabet

These 11 pre-measures were analyzed with the 3-way analysis variants: I.Q., sex and treatment. The analysis indicated that three tests were significant at the 5% level favoring the Individualized group.

The eleven pre-measures were analyzed with the two treatments as variables.

TABLE VII

Raw Score Means of Pre-Measures Compared for the Individualized Reading and Basal Reader Methods

Pre-measures	Individualized	Basal	Diff. of Means	F-Ratios
1. Durrell-Murphy Phonemes	24.00	20.32	3.68	7.70*
2. Durrell-Murphy CAPS	18.45	17.35	1.10	2.30
3. Durrell-Murphy L.C.	14.41	12.93	1.48	4.30*
4. Durrell-Murphy Total	32.83	30.27	2.56	5.56*
5. Durrell-Murphy Learning Rate	8.35	8.08	.17	.16
6. Thurstone Pattern Copying	16.77	16.32	.45	.47
7. Thurstone Identical Forms	13.24	12.89	.35	.26
8. Metropolitan Word Meaning	8.76	8.67	.09	.08
9. Metropolitan Listening	7.99	8.02	-.03	.02
10. Metropolitan Matching	6.31	6.78	-.47	1.66
11. Metropolitan Alphabet	9.28	8.35	.93	6.21*

These ratios have 1 and 331 degrees of freedom. An F ratio of 2.54 is necessary for a significant difference.

*Significant difference at the .05 level, favoring the Individualized treatment.

On the Phonemes and Lower Case Letters, sub-tests of the Durrell-Murphy Reading Readiness Test and the Alphabet, subtest of the Metropolitan Reading Readiness Test, the Individualized method was significantly

favored. This group showed some superiority but not a significant difference on all but two of the remaining pre-measures.

When the boys and girls were compared on the pre-measures there were slight differences.

TABLE VIII

Raw Score Means of Pre-Measure Variables
Compared by Sex Across Treatments

Pre-measures	Boys	Girls	Diff. of Mean	F Ratio
1. Durrell-Murphy Phonemes	21.10	23.30	-2.30	.10
2. Durrell-Murphy CAPS	17.30	18.33	-1.23	.16
3. Durrell-Murphy L.C.	12.07	14.33	-1.66	1.33
4. Durrell-Murphy Total	30.19	31.04	-2.85	.02
5. Durrell-Murphy Learning Rate	0.20	0.16	.04	.36
6. Thurstone Pattern Copying	10.33	10.37	-.03	2.37
7. Thurstone Identical Forms	12.02	13.29	-.44	.07
8. Metropolitan Word Meaning	9.01	8.40	.33	9.19**
9. Metropolitan Listening	7.74	8.20	-.46	.17
10. Metropolitan Matching	8.97	8.32	-.38	2.34
11. Metropolitan Alphabet	8.32	9.19	-.37	.18

These ratios have a 1 and 221 degrees of freedom. An F ratio of 2.34 is necessary for a significant difference.

*Significant difference at the .01 level, favoring the boys.

The girls were slightly superior on all but three pre-measures. On the Word Meaning sub-test of the Metropolitan Landing Readiness Test the boys were favored at the .01 level of significance.

TABLE IX

Summary of the Analysis of Variance of 11 Pre-Measures for the 3 Way Analysis: Sex, I.Q. and Treatment

F-ratios are reported

Variables	F ratios for the 3 way analysis of Variance						
Pre-measures	C B A	B A	C A	C B	A	B	C
1. Durrell-Murphy Phonemes	.13	1.20	.00	.93	.18	32.80*	7.76**
2. Durrell-Murphy CAPS	.95	.00	.41	1.70	.16	49.39*	2.30
3. Durrell-Murphy L.C.	.92	.90	.31	1.68	1.35	33.16*	4.38**
4. Durrell-Murphy Total	.72	.02	.42	1.86	.62	43.32*	3.34
5. Durrell-Murphy Learning Rate	1.92	.30	.24	1.83	.96	38.22*	.16
6. Thurstone Pattern Copying	.44	1.03	1.13	1.17	2.37	71.80*	.47
7. Thurstone Identical Forms	1.86	1.15	.01	1.64	.07	25.60*	.26
8. Metropolitan Word Meaning	1.95	.37	1.73	1.90	9.79*	48.43*	.08
9. Metropolitan Listening	2.12	1.20	.24	1.79	.17	41.82*	.02
10. Metropolitan Matching	.13	.41	.34	1.38	2.34	30.76*	1.64
11. Metropolitan Alphabet	.33	.39	.42	1.38	.06	33.90*	4.21**

A = Sex

B = I.Q.

C = Treatment

* = Significance at the .01 level

** = Significance at the .05 level

Table IX shows no significant difference between pre-measure results when the data were analyzed with the 3 variables sex, I.Q. and treatment.

No significance was shown when the test data were analyzed with the 2 variables I.Q. and sex.

No significance appeared when the analysis of variance was determined for each pre-measure and the three intelligence quotients Levels-High-Middle-Low for each treatment.

When the analysis of variance was determined for the levels of intelligence alone, the results - as might be expected, favored the high intelligence group at the .05 level of significance.

SUMMARY

From the results of the analysis of variance pertaining, the Individual treatment appeared slightly superior to the Small treatment with a significant difference at the .05 level on 3 sub-tests: The Durrell-Murphy Reading Readiness Test: Phonemes and Lower Case Letters and the Metropolitan Reading Readiness Test: Alphabet test.

The boys were significantly superior on the Metropolitan Reading Readiness Test: Word Meaning sub-test. All other tests showed no significant sex differences.

Analysis of Post-Measures

The results of the final tests were analyzed by the same multivariate analysis of variance program as the pre-instruction measures. For the final data processing, the analysis of variance included 18 post-measure variables analyzed three ways by: treatment, intelligence and sex.

These measures with the exception of the Gilmore Oral Test, were all highly significant favoring treatment 1, the Individualized approach.

On the post-measures analysis a few variables yielded sex differences when analyzed across treatments. The boys were significantly superior on the Stanford Arithmetic Test, while the girls were significantly superior to the boys on the Stanford Spelling Test and the January total score of the Durrell-Murphy Phonics Test.

Table 3 shows the comparison of raw score means of the Individualized and Basal treatments on the 10 post-measures. Grade levels are included to aid interpretation of standardized test results. For tests without available grade norms, possible raw scores have been included.

The post-measures for this study were:

Group Tests:

1. Metropolitan Word Recognition Test
2. Stanford Word Reading

   Pupil's task is to select one word from four to identify a picture.
3. Stanford Paragraph Meaning

   Pupils select one of four words which correctly completes the meaning of the paragraph.
4. Stanford Vocabulary

   Pupils listen to the key part of a sentence and choose one of three words to correctly complete the sentence.

5. Stanford Spelling

Pupils write words from dictation

6. Stanford Word Study

Pupils listen to three words and identify the word which contains the word element specified in a dictated key word.

7. Stanford Arithmetic

Tests of measures, problems and number concepts are included.

Individual Tests

8. Gilmore Oral Reading - Accuracy

9. Gilmore Oral Reading - Rate

10. Gates Word Pronunciation

Pupil pronounces as many words as possible from a list of 80 increasingly more difficult words.

11. Gilmore Comprehension

Comprehension is checked by oral questions following oral reading of individual paragraphs.

Group Tests

12. Gates Word Recognition

Pupils match pictures and phrases read

13. Durrell-Murphy Capital Letters

Pupils select dictated letters from rows of letters.

14. Durrell-Murphy Lower Case Letters

15. Durrell-Murphy Sounds in Isolation

Pupils select the letter as the teacher says the sound of the letter.

16. Durrell-Murphy Initial Sounds

Pupils select the word which begins with the same sound as the dictated word.

17. Durrell-Murphy Final Sounds

Pupils find the word which ends like the dictated word.

18. Durrell-Murphy Phonograms

Pupils identify the phonogram which the teacher pronounces in isolation.

TABLE 9

Comparison of Individual and Recall Treatments on 19 Post-Reconstruction Measures by Sum Square Method, Grade Equivalents or Possible Scores, and F ratios Determined by Analysis of Variance

Post Measures	Individualized		Recall		Diff. in Mean	Coeff. of Corr.	F Ratio
	R.S. Mean **	Mean Gr. ***	R.S. Mean **	Mean Gr. ***	R.S. Mean **		
1. Detroit Word	18.72	2.0	11.56	1.6	7.16	.3753	42.02
2. Stanford Word	24.87	2.0	13.11	1.7	9.76	.3130	73.13
3. Stanford Para. Mean	24.95	1.9	12.93	1.7	9.02	.4105	48.19
4. Stanford Vocabulary	22.21	2.1	13.29	1.8	7.92	.3070	28.92
5. Stanford Spelling	17.90	2.1	8.72	1.7	6.17	.4276	32.01
6. Stanford Word Study	18.72	2.1	13.20	1.7	6.52	.4316	34.83
7. Stanford Arithmetic	19.72	1.9	16.50	1.7	3.23	.2363	18.48
8. Gilmore Accuracy	33.62	3.8	22.64	2.7	11.98	.4996	71.90
9. Gilmore Rate	60.08	2.5	62.61	2.3	-1.53	-.2368	-.32
10. Gates Word Perm.	36.35	80*	23.46	80*	12.89	.3150	72.78
11. Gilmore Comp.	32.61	3.1	26.73	3.3	5.88	.3630	34.93
12. Gates Word Recog.	38.52	3.1	32.03	2.6	5.47	.3631	38.04
13. Durrell-Murphy CAPS	22.59	20*	18.17	20*	4.42	.4238	49.32
14. Durrell-Murphy L Case	28.77	20*	23.50	20*	4.27	.3006	21.47
15. Durrell-Murphy Tend. Sds.	35.73	42*	23.42	42*	12.31	.1815	232.57
16. Durrell-Murphy Sens. Sds.	34.59	42*	23.35	42*	11.24	.2160	230.46
17. Durrell-Murphy Fin. Sds.	13.78	12*	7.39	12*	6.39	.4323	134.08
18. Durrell-Murphy Phons.	42.77	50*	26.59	50*	16.18	.3437	220.48

* Total possible raw score
** Raw Score Mean
*** Grade

These ratios have 1 and 231 degrees of freedom. A ratio of 3.94 is necessary for significance.

Table X shows the difference between the achievement of the Individual and Basal approaches on each of the 10 post-measures as signified by the F ratios and grade levels.

On the phonetic tests or those directly dependent on phonetic ability the Individualized classes showed their greatest superiority, significance beyond the .01 level.

Tests	Differences in Means
Detroit Word Recognition Test	4 months
Stanford Word Test	3 months
Standard Spelling Test	4 months
Stanford Word Study Test	4 months
Gilmore Accuracy Test	1.1 grades
Gates Word Pronunciation Test	12.9 words
Gates Word Recognition Test	.5 grade
Durrell-Murphy CAPS Test	4.42 letters
Durrell-Murphy Lower Case Test	4.27 letters
Durrell-Murphy Isolated Sounds Test	10.31 sounds
Durrell-Murphy Initial Sounds Test	11.04 sounds
Durrell-Murphy Final Sounds Test	4.30 sounds
Durrell-Murphy Phonograms Test	15.08 sounds

Significant differences favoring the Individualized method, at the .01 level were also shown on the reading comprehension tests.

Tests	Differences in Means
Stanford Paragraph Meaning	2 months
Stanford Vocabulary	2 months

Gilmore Comprehension	0.6 grades
The Gilmore Rate Test was the only subtest on which the Basal method was favored.	0.33 raw scores
This advantage was very slight, as shown by the insignificant F ratio of	.39

The Individualized classes were significantly superior beyond the .01 level on all but the Gilmore Rate Test. The Basal group was slightly superior on this test which may have been due to the emphasis on oral reading expression and the larger amount of silent reading practice experienced by the Individual classes.

The difference between the two treatments could probably have been greater if the upper limits had been higher on the Stanford Achievement Test, Gates Primary Reading-Vocabulary Test and the Durrell-Murphy Phonics Test. Several more of the Individualized pupils than the Basal pupils achieved perfect scores on these tests.

It may be observed that the highest F-ratios appear for those post-measures most dependent on phonetic analysis skills. Although the Individualized classes showed some superiority on the pre-measures analysis, these advantages could not have provided a sufficient influence to produce such mean differences favoring the Individualized method beyond the .01 level.

This conclusion was verified by a second co-variance analysis of the post-measures using as covariates, the four pre-measures which showed significant differences, favoring the Individualized treatment. These tests were:

5. Gates-Murphy Phonics
6. Gates-Murphy Lower Case Letters
7. Gates-Murphy Total Score
8. Recognition-Alphabet

The highly significant difference between the Individualized and Basal approaches must be attributed to emphasis placed on the comprehensive phonetic program which constituted the basis for the program. The highest P ratios resulted from those tests highly dependent on mastery of phonetic skills.

Grade equivalents are included in Table 9 to provide perceptual interpretation to the achievement levels and differences between the treatments. On those tests for which norms were not available the possible one scores were included as a basis for comparison of achievement.

It may be observed that the Individualized group achieved more than a full grade higher than the Basal group on the Gilmore Oral Reading Accuracy Test and a grade and a half higher on the Reading Comprehension for the Gilmore Test. The differences on the other standardized tests were generally 3 or 4 months, favoring the Individualized treatment.

A point of interest is the difference in achievement of both groups on the Gates Primary Reading Vocabulary Test and the Stanford Word and Vocabulary Tests. The Individualized group achieved more than a full grade and the Basal group nearly a grade higher on the Gates than was achieved on the Stanford Achievement Test. The Gilmore Accuracy Test rated the Individualized group one grade and eight months higher than

the Stanford Word Test and the basal group achieved a full grade higher on the Gilmore Accuracy Test than on the Stanford Word Test.

The Individualized classes achieved 3.2 grades higher on the Gilmore Paragraph Comprehension Test than the Stanford, and the difference for the Basal classes was 1.8 grades higher on the Gilmore Test. Some of the difference may be attributed to the fact that the Gilmore Test is oral without time restrictions.

The wide difference between the grade levels for these standardized tests for the same treatment would indicate that the norms for the Stanford Achievement Test, Form X may be unreliable and should be studied.

Post-measures 13-18, Durrell-Murphy Phonics Test, had no norms available. However, observation of the difference between the raw scores among and the possible scores will indicate the average achievement for the treatments on each test. The large F ratios show that the Individualized treatment rated very significantly higher than the Basal treatment on all of these phonetic tests.

When the results of the 18 post-measures were compared with Intelligence Quotient levels across treatments the F ratios for the adjusted variates very significantly favored the superior I.Q. levels.

When the analysis was compiled for the comparison of treatments and intelligence quotient levels for the 18 post-measures, the differences were not significant.

TABLE [illegible]

Analysis of Post-Measures by High and Low I.Q. Levels and Treatments

Post-Measures	High I.Q.			Low I.Q.			
	Mean Scores		Diff. M.	Mean Scores		Diff. M.	F Ratios*
	Ind. R.	Level A.		Ind. R.	Level B.		
1. Detroit Word	23.83	16.70	9.13	9.00	6.27	2.73	1.63
2. Stanford Word	29.63	22.84	3.79	18.77	12.60	6.17	.81
3. Stanford Para. Mean	31.26	26.63	4.93	16.63	10.63	3.84	.80
4. Stanford Vocabulary	26.61	23.63	2.96	16.30	14.41	1.89	.29
5. Stanford Spelling	17.06	13.16	3.90	9.13	4.27	4.86	.39
6. Stanford Word Study	46.72	41.32	3.40	30.04	22.84	7.20	.13
7. Stanford Arithmetic	48.17	43.05	3.12	27.17	21.37	3.60	.13
8. Gilmore Accuracy	42.30	31.43	10.87	21.60	10.49	11.11	.17
9. Gilmore Rate	69.63	70.46	-.83	48.23	49.00	-2.77	-.06
10. Gates Word Prem.	47.69	31.86	3.83	22.17	13.81	8.36	1.67
11. Gilmore Comp.	39.09	32.16	6.93	21.33	12.89	8.64	.07
12. Gates Word Recog.	44.63	39.33	3.28	20.26	17.95	10.31	2.13
13. Durrell-Murphy CAPS	24.81	21.63	3.33	17.64	13.33	4.29	.31
14. Durrell-Murphy L Case	22.63	17.05	3.38	13.81	8.92	4.89	.40
15. Durrell-Murphy Ind. Sds.	40.02	32.27	7.73	23.37	13.81	9.76	1.33
16. Durrell-Murphy Indt. Sds.	39.67	30.34	9.13	27.21	13.73	13.48	1.38
17. Durrell-Murphy Fin. Sds.	13.94	9.68	4.28	3.97	4.43	4.34	.03
18. Durrell-Murphy Phono.	32.63	23.37	17.06	29.40	16.39	12.81	.08
N	34	37		33	37		

The F ratio for the intelligent ratio criterion is 1.22. This low ratio would predict no significance for this analysis.

An F ratio of 0.26 is necessary to show a significant difference.

Table VI F ratios show that when the results on the post-measures were analyzed to compare the high and low intelligence pupils of the individualized method with the fossil reader approach there were no significant differences. This would be interpreted to mean that the individualized method did not serve one ability group significantly better than the other. The same was true of the fossil progress. However observation of the differences in achievement seems between the high individualized and high fossil groups and the low individualized and low fossil groups showed marked superiority favoring the individualized group, especially on those tests measuring phonetic ability and in application.

It is interesting to note that on 16 of the tests the difference in means was greater for the low intelligence group, favoring the individualized method. However, this difference is not significantly higher and should not be noted as a true difference.

The data were analyzed to compare the achievement of boys and girls on the post-measures with the I treatments.

TABLE XII

Comparison of the Achievement of Boys and Girls on the 10 Post-Measures with Treatments

Post Measures	Raw Score Means Girls	Boys	DIFF. M.	F Ratios*
1. Detroit Word	17.05	13.77	3.28	.00
2. Stanford Word	23.08	21.63	2.43	.06
3. Stanford Para. Mean.	24.07	20.40	3.67	.30
4. Stanford Vocabulary	21.12	20.80	.32	.26
5. Stanford Spelling	12.98	11.11	1.87	4.00
6. Stanford Word Study	37.33	36.31	.92	2.82
7. Stanford Arithmetic	37.24	37.84	- .40	- 3.00
8. Gilmore Accuracy	30.74	26.41	10.33	.83
9. Gilmore Rate	63.84	37.00	6.84	.22
10. Gates Word Pron.	32.43	29.00	3.38	.06
11. Gilmore Comp.	29.76	28.21	1.33	.01
12. Gates Word Recog.	36.74	34.63	2.11	.33
13. Durrell-Murphy CAPS	21.19	20.16	1.03	3.17
14. Durrell-Murphy L. Case	17.30	15.63	1.67	3.61
15. Durrell-Murphy Incl. Sds.	32.20	30.33	1.85	3.49
16. Durrell-Murphy Init. Sds.	30.98	28.95	2.03	3.08
17. Durrell-Murphy Fin. Sds.	10.08	9.73	.33	.41
18. Durrell-Murphy Phono.	37.06	33.96	3.70	2.82

The F Ratio for the likelihood ratio criterion is 1.39 which shows the differences to be non-significant.

*These ratios have 3 and 331 degrees of freedom.

Table XII shows the difference between the mean achievement scores for boys and girls on the post-measures with treatments to be non-significant.

However, the girls showed some superiority over the boys on the

Stanford Spelling Test, Stanford Word Study Test and the Durrell-Murphy Phonics Tests of Letters and Sounds, except final sounds. The boys were superior to the girls on the Stanford Arithmetic Test.

When the girls and boys were compared by treatment on the 22 Post-measures the Difference in Means showed no significant difference.

TABLE XIII

Comparison of Means for Girls and Boys
by Treatment on the 22 Post-Measures

Post-Measures	Individualized			Basal		
	Girls	Boys	Diff.M.	Girls	Boys	Diff.M.
1. Gates Word	19.82	16.06	3.76	12.76	11.11	1.65
2. Stanford Word	27.48	24.05	1.43	19.36	18.55	.81
3. Stanford Paragraph Meaning	25.63	22.93	2.68	20.42	17.42	3.00
4. Stanford Vocabulary	22.61	21.94	.67	19.11	19.47	-.36
5. Stanford Spelling	16.23	13.36	.93	10.55	8.08	2.47
6. Stanford Word Study	33.70	29.74	-.04	33.63	32.74	.91
7. Stanford Arithmetic	33.06	40.42	-3.36	34.42	36.59	-.17
8. Gilmore Accuracy	34.91	31.99	3.72	24.24	20.80	3.44
9. Gilmore Rate	63.05	56.05	7.00	63.15	58.11	6.94
10. Gates Word Rem.	30.00	24.05	6.00	23.69	23.23	.46
11. Gilmore Comprehension	33.03	31.58	1.45	24.18	24.29	-.11
12. Gates Word Recognition	39.25	37.52	1.73	32.82	31.27	1.65
13. Durrell-Murphy CAPS	22.61	22.56	.05	18.97	17.36	1.61
14. Durrell-Murphy L Zone	19.05	18.39	.66	14.37	12.62	2.15
15. Durrell-Murphy Init. Sds.	35.60	35.54	.16	26.61	24.21	2.40
16. Durrell-Murphy Int. Sds.	35.06	34.88	.18	24.64	22.04	2.60
17. Durrell-Murphy Final Sds.	11.82	11.72	.10	7.38	7.41	-.03
18. Durrell-Murphy Phone.	43.65	41.85	1.80	28.61	24.74	3.87

Table XIII shows that the girls achieved slightly higher scores than the boys on both treatments.

The Individualized girls were not more superior to the boys of that treatment, than the Basal girls were superior to Basal boys. Both girls and boys of the Individualized program were superior to boys or girls of the Basal method. No significant differences were shown by either sex of each treatment.

The analysis of covariance results substantiate the analysis of variance for post-measures. The highly significant differences between treatments favoring the Individualized approach were sufficiently substantial to outweigh any superiority on the analysis of the pre-measures which might lessen the validity of the differences. The ratio for the likelihood ratio criterion was 16.16. The F ratios for individual variables were comparable to the F ratios on the analysis of variance statistics.

Analysis of covariance was also applied to the variables: I.Q., sex, and treatment for the post-measures and the four selected variables on which the Individualized group showed superiority. The covariance analysis supported the findings of the analysis of variance.

SUMMARY:

The analysis of variance and covariance for the post-measures data produced the following statistical results:

After 10 days of instruction the Individualized reading method produced superior learning results to the Basal method on tests of upper and lower case letters and phonemes. Table I, page 16 of this report.

At the mid-point in the year, end of January, test results on the Detroit Word Recognition and phonetic ability on the Durrell-Murphy Phonics Test showed the Individualized classes to be significantly

superior to the Basal reader classes. Table II, page 17 of this report.

The end-of-year measures showed a highly significant difference between the methods favoring the Individualized reading method. Table V, page 27 of this report.

There were no significant differences between the achievement of boys and girls on either the Individualized or Basal reader method.

Teacher Ratings:

The end of year rating of teachers which was a part of the cooperative research common data showed the Individualized Reading teachers to be superior to the Basal Reader teachers. This difference was particularly evident in the adjustment of instruction to individual learning needs and provision of appropriate and sufficient materials. These differences in teaching ability were not obvious when the teachers were selected for the project. These special strengths of the Individualized teachers were probably the results of the method which they were trained for and committed to follow. These features were a major concern of the workshop and the weekly visits of supervisors, as the basis of the Individualized method.

CONCLUSIONS AND IMPLICATIONS

The Individualized reading method in this study was developed through two related basic programs. A systemetic word skills program was taught by means of an individualized intensive phonetic method and applied in a program of individualized story reading. The significant success of this Individualized method would imply that adjustment to levels and progress in learning is essential for the effective teaching

of reading. The program which adjusts to progress in the sub-skills requires more than general techniques. Continuous evaluation of individual progress and effective teaching to specific needs is the basic philosophy of this Individualized method.

The reading tests on which the Individualized program showed significant effectiveness over the Basal reader method are:

Phonetic skills and application

Durrell-Murphy Phonics Test
- Upper and lower case letters
- Isolated sounds
- Initial and final sounds in words
- Isolated phonograms

Gilmore Oral Reading Test - Accuracy

Gates Primary Reading Test - Word Recognition

Gates Word Pronunciation Test

Detroit Word Recognition Test

Stanford Achievement Test
- Word Test
- Spelling
- Word Study

Reading Comprehension Tests

Stanford Paragraph Meaning

Stanford Vocabulary

Gilmore Oral Reading - Comprehension

The Individualized method used in this study has been described as directly based on a comprehensive systematic program of phonetic skills: Durrell-Murphy Speech-To-Print Phonics. The teaching of phonics began

with the first day of instruction, since the readiness program was basically concentrated instruction on letter names and sounds. The Individualized classes developed more phonetic skill and faster than the Basal classes, as shown by the phonetic tests administered at the end of September, January and the final testing in May.

The findings of this study would indicate that an effective first grade reading program should include a comprehensive phonetic program as an essential element. Concentrated phonetic instruction should begin with the readiness program and continue throughout the year, permitting pupils to progress to more difficult skills as each is able. The less formal and more widely spaced introduction of word skills which is characteristic of the Basal Reader program seems slower and less effective in preparing pupils for independent word recognition and spelling. With no limit, except the child's ability, placed on the amount of phonetic skill to be mastered at first grade level, the pupil is free to acquire skills reserved for grades two and three in the programmed Basal method.

The independence in word skills lessened the necessity of introducing many of the new words prior to independent reading. Independent word skills were essential to the individual library reading program of the Individualized method since there wasn't time for the teacher to introduce most of the new words. Pupils were motivated by their self-discovered independence to read more and varied books. It was necessary that pupils become independent by helping each other and themselves. Consequently, pupils in the Individualized program read many more books than pupils in the Basal progam. Since reading of library books was a basic element

in the program as they were used as a primary source of instructional materials, independence and interest in books was of prime importance.

The quality, quantity and interest in written expression was greater in the Individualized classes, as observed from writing samples, and unassigned written activities, teachers' reports and pupils' remarks.

The analysis of data showed that the Individualized method served the high and low ability groups with equal effectiveness. This was also true of the Basal reader program.

It can be concluded that the Individualized method studied in this research was equally effective for all ability groups and resulted in significantly superior reading to the Basal program at all ability levels. The implication would seem to be that the Basal Reader program might serve the pupils more effectively if the basic features of the Individualized method were incorporated. An early intensive phonetic program provides more effective word skills mastery than does the formal Basal reader program. Individualized library reading with greater flexibility in class organization provides a motivated program for more and varied independent reading.

Pupil-teams and individual learning constituted the major organizational plans for the Individualized method, providing several types of grouping by which each pupil's needs were more directly served than by the ability grouping method. From the reports of teachers and pupils this system of classroom organization was effective and enjoyable. The results of this study would indicate that the pupil-team type of organization could be an effective pattern of grouping for any reading method.

There were few significant differences indicated in the achievement of boys and girls. It can be concluded that neither the Individualized nor Basal method promoted learning for one sex more than the other through choice of materials and learning situations.

Teachers of the Individualized approach expressed approval of the method by electing to continue teaching by those techniques instead of returning to the Basal reader program after the completion of the project. Also, interest in the program extended to other teachers so that the requests to participate in a second year of the research included 32 Individualized classes. This attitude would indicate that the teachers found the method more effective than the Basal approach and not too demanding.

The improvement of teaching ability among the Individualized teachers would indicate that concentrated in-service education followed by systematic supervision and evaluation is effective in improving classroom teaching.

A second year of research with the same methods should determine the permanent effects of the Individualized method.

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APPENDIX

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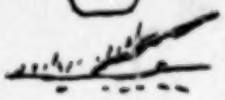
ill		hill

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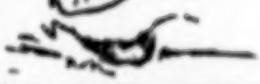
ole		hole

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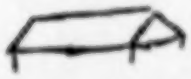
oof		roof

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